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Molar and molecular mobilities: The politics of perceptible and imperceptible movements

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Abstract

In this paper, I examine the processes through which movements emerge and are rendered perceptible or imperceptible, building upon the writings of geographers, mobility scholars and philosophers who have sought to overcome or efface the binary of mobility/stasis without flattening differences or overlooking questions of ‘the political’. The paper does this by distinguishing between ‘molar’ and ‘molecular’ movements, drawing upon Gilles Deleuze and Félix Guattari’s *A Thousand Plateaus* to trace how perceptions of movement and stasis emerge in a world that is in process and becoming. The molar and molecular are not presented as opposed terms in binary tension, but as overlapping tendencies or ‘segmentations’. I argue that a focus on movements and political forces that are becoming-molar and becoming-molecular requires mobility scholars and political theorists to move beyond narrow definitions founded upon binaries of mobility/stasis, the political/apolitical, and micro/macro. In doing this, the paper seeks to advance debates in geography, mobility studies and contemporary philosophy on processual thinking, vibrant matter, micropolitics and the politics of affect. Drawing upon the example of the Israeli separation wall in the West Bank, I then examine how molecular movements and affects are important for understanding the multiple movements and complex materialities of seemingly static molar entities.

Keywords

Mobility, stillness, affect, processual philosophy, non-representational theory

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Introduction

Movement has an essential relation to the imperceptible; it is by nature imperceptible. Perception can grasp movement only as the displacement of a moving body or the development of a form. Movements, becomings, in other words, pure relations of speed and slowness, pure affects, are below and above the threshold of perception. (Deleuze and Guattari, 1988: 280–281)

While it is the case that the world is always in motion at a molecular level, it still presents plenty of immobilities at both experiential and political levels. Molecular vibrations are not much comfort, I expect, to Palestinians who cannot walk through the wall that has been built between their homes and their farmland. Immobilities (and indeed time-spaces) such as these cannot be wished away with a theoretical wand. (Cresswell, 2014: 719)

With a resurgence of research focussing on movement and process in the humanities and social sciences over the past two decades, there have emerged a diverse set of debates about the politics of processual, nomadic and new materialist thinking, and the implications such work may have for approaches to movement, stasis, materiality, subjectivity, sexual difference, action, affect and related matters. While post-structuralist philosophers, complexity theorists and new materialist thinkers have very actively drawn upon different traditions of ‘processual’ thought to argue for the centrality of movement, flow and flux to the composition or unfolding of the world,¹ other thinkers – notably mobility theorists and feminist scholars – have argued, like Cresswell above, that fluid and mobile ontologies and a ‘nomadic metaphysics’ are in danger of reducing or flattening movement to a single, undifferentiated mass flow, wherein action, agency and power are effectively dissolved or rendered unplaceable with the dissolution of bounded objects.² In the latter view, a ‘sedentarist metaphysics’, with its associated fetishisation of objects and marginalisation of mobile processes, is simply replaced with a ‘nomadic metaphysics’ which ‘puts mobility first, has little time for notions of attachment to place, and revels in notions of flow, flux and dynamism’ (Cresswell, 2006: 26; also Malkki, 1992). In the critical accounts of Malkki, Cresswell and others, these two contrasting world-views – one ‘sedentarist’, the other ‘nomadic’ – are aligned with divergent ontologies, which are placed in opposition or binary tension.

In this paper, I want to argue that such binary thinking obscures the ways in which different bodies, movements and political actions and events are continually *becoming* perceptible and imperceptible, and that such thinking leads to rather conservative approaches to movement within mobility studies which are underpinned by simplistic approaches to agency, action, motile force and spatial displacement. To do this I build upon the writings of mobility theorists and post-structuralist thinkers who have sought to overcome or efface the binary of mobility/stasis without flattening differences or overlooking questions of ‘the political’ (Adey, 2006; Bissell, 2010, 2011; Bissell and Fuller, 2011; Massumi, 2002, 2015, 2017; Merriman, 2012a). Drawing upon the writings of Gilles Deleuze and Félix Guattari (1988) I distinguish between ‘molar’ and ‘molecular’ movements in order to examine the processes through which movements emerge and are rendered perceptible and imperceptible, with perceptions of movement and stasis emerging amidst the unfolding of the world and the becoming of events.³ Despite an intermittent interest in the ‘minor’, geographers have only recently been paying attention to the distinction between the molar and molecular, in part through discussions of macropolitics and micropolitics (see Jellis and Gerlach, 2017; Katz, 1996). In contrast, I want to follow scholars who emphasise that the molar and molecular are not distinguished by size, scale or substance, but by their perceptibility,

representational legibility, mode of organisation, consistency and ‘segmentarity’ (Deleuze and Guattari, 1988: 215, 217, 219).⁴ On the one hand, molar masses or bodies are ‘punctual’, highly organised, easily represented and expressed, and are perceived as clearly demarcated and bounded assemblages or aggregates that are frequently aligned with state and non-state actors (Deleuze and Guattari, 1988: 57, 216, 222, 294). Molecular movements, on the other hand, are vital, incessant, and unruly, operating below the threshold of perception and associated with becomings of innumerable kinds. Becomings are, here, apprehended as ‘molecular’ and ‘minoritarian’, and they may be aligned with minor or molecular political actions that traverse, cross-cut and continually undermine molar imaginations, for molecular movements constitute the vital potential to ‘thwart and break through the great worldwide organization’ (Deleuze and Guattari, 1988: 291, 292, 216). In this paper, I argue that the political movements, forces and desires that are variously aligned with the molecular and molar can provide a powerful tool for mobility scholars and political theorists to overcome realist and structuralist analytic tendencies to allude to ‘common-sense’ (Western) materialities, molar experiences, expressions and sensations of movement. What’s more, they can enable geographers and mobility scholars to adopt more affective molecular understandings of movement and more distributed understandings of the political which are necessary if we are to take seriously the relational and temporal aspects of the unfolding of movements, events and spatial formations (see Amin and Thrift, 2013; Merriman, 2012a). In writings on mobility, this approach has most recently been adopted by David Bissell (2014, 2016), who has drawn upon Deleuzian writings on affect to argue that an attention to a molecular or micro politics of bodily movements, as well as a molar or macro politics, is necessary if we are to understand the affective forces, ‘micro events and encounters’ (Bissell, 2016: 395) constituting mobile bodies, leading to ‘moment-to-moment transitions in power that give rise to difference’ (Bissell, 2016: 399; see also Merriman, 2012a). While I find his distinction between a ‘micro’ and ‘macro’ politics rather problematically introduces issues of size and scale into discussions of transversal affects, practices and actions, a focus on molecular and minor political movements and affects refocuses attention on the imperceptible ‘proto-political’ forces and movements which are inseparable from (and irreducible to) forces and movements performed by bodies aligned with perceptible molar political collectives (Massumi, 2015: ix). As Bissell has acknowledged, these kinds of approaches force us to ‘expand our understanding of what constitutes mobility politics’ (Bissell, 2016: 395), moving away from a focus purely on accessibility, exclusion and macro-political structures that assumes pre-formed segmented subject-positions – an approach which has long dominated accounts of the politics of mobility in transport geography and mobility studies (see, for example, Cresswell, 2006; Hine, 2011; Law, 1999; Lucas, 2011). Instead, these approaches push us to understand the relational and often imperceptible political entanglements cross-cutting heterogeneous ‘bodies’ which have a differential ‘capacity for affecting and being affected’ (Deleuze, 1988: 123), moving and being moved. Bodies, in this Deleuzian and Spinozan sense, are not reduced to sovereign, monadic human subjects, bodies or actors, rather they are approached as ‘kinetic’ and ‘dynamic’ entities composed of ‘relations of motion and rest, of speed and slownesses’ and a capacity to affect and be affected (Deleuze, 1988: 123).

The approach I am advocating requires us to unpick and think across the binary tensions which have guided much mobilities thinking (e.g. Urry, 2007), disavowing the idea of pre-formed closed-off, sovereign subjects, while simultaneously acknowledging the material and perceptual force of different molar bodies that move in relation and tension. It is not simply a case of bodies being imagined as mobile *or* still, bounded *or* relational, or molecular *or* molar. Neither is it a case of thinking the world as either in process *or* composed of discrete

things. What this approach requires is an attunement to the affective political processes through which molecular consistencies and molar consistencies emerge, as bodies simultaneously become perceptible and imperceptible.

In the next section, 'Processual movements and critiques of mobile ontologies', I discuss the resurgence of academic research on processual movements over the past two decades before outlining some of the criticisms directed towards mobile ontologies and nomadic thinking. I examine how these critical responses frequently fall back on realist approaches founded upon binaries and dualisms (e.g. movement/stasis) which are themselves built around simplistic conceptions of materiality, action and subjectivity, and a focus on perceptible molar movements. In the following section, 'Molar and molecular geographies', I explain why it is important to be alert to the emergence of molecular movements, affects and forces as well as molar geographies, tracing how molar organisations are cross-cut and undermined by molecular movements, just as molecular mobilities gain consistency and have a tendency to become molar, at particular levels. In the final section, 'Molecular and molar mobilities: the Israeli separation wall', I suggest that molecular movements and molecular affects are important for understanding the multiple movements and complex materialities of seemingly static molar entities such as walls and fences. Focussing on accounts of mobilities relating to the Israeli separation wall and Qalandia checkpoint in the West Bank, I examine how bodily movements, materialities and distinctive environments become embroiled in complex affective movements, relations and circulations reflecting the *becoming*-molecular of bodies and the *becoming*-molar of molecular forces and affects.

Processual movements and critiques of mobile ontologies

Philosophical approaches foregrounding movement are nothing new. For centuries, processual philosophers have argued that movement is primary and foundational, underpinning the vibrancy of bodies, matter and events (Bennett, 2010; Bergson, 1911, 1912, [1946]1992; Deleuze and Guattari, 1988; Lucretius, [c.55 BC]1951; Manning, 2009; Massumi, 2002; Whitehead, [1928]1978). In particular, Lucretius' atomist ontology – in which atoms fall downwards in laminar flows through a void, with differentiated matter emerging as a result of the swerve or declination of atoms and a 'productive and destructive' turbulence (Serres, [1977]2000: 98, 138) – was to have a significant influence on Henri Bergson's approach to 'perpetual becoming' and 'perpetual flowing' (Bergson, 1911: 287), and Michel Serres' ([1977]2000) re-assessment of the history of early physics, with both thinkers influencing a resurgence of processual and atomist thinking in the late 20th century. This resurgence may in part be attributed to the rise of anti-essentialist and post-structuralist philosophies in the 1980s and 1990s, and the influence of Deleuze and Guattari's (1988) *A Thousand Plateaus*, but another reason lies in the resonance of their thinking with theories of complex, self-organising, non-linear systems characterised by dynamic instabilities and chaotic movements (Prigogine and Stengers, 1982, 1985).

Modern processual thinkers rarely adopted Lucretian thinking in all its key aspects. For example, Bergson rejected the base materialism of the atomists (Baskin, 1959), while Deleuze and Guattari (1988) combined Lucretian thinking on flow, movement and turbulence with a Spinozan materiality where 'infinitely small' constituent elements may or may not cohere, coalesce, assume molar form, and become perceptible:

...depending on their degree of speed or the relation of movement and rest into which they enter, they belong to a given Individual, which may itself be part of another Individual governed by another, more complex, relation, and so on to infinity. (Deleuze and Guattari, 1988: 254)

What all of these thinkers share, though, is a belief in the primacy of movement. Philosopher Brian Massumi sees ‘positionality’ as ‘an emergent quality of movement’, framing ‘the problem’ as one of ‘explain[ing] the wonder that there can be stasis given the primacy of process’ (Massumi, 2002: 8). Dancer and philosopher Erin Manning positions movement as primary, from which bodies, materials, sensations and worlds emerge (Manning, 2009, 2013, 2016), while political theorist Jane Bennett has drawn attention to the ‘vital materialities that flow through and around us’ which ‘are crucial to political life’ (Bennett, 2010: x).

While philosophical experiments *with* processual thinking are fairly prevalent and have been echoed in recent mobilities scholarship (see Adey, 2006; Bissell, 2010, 2011; Merriman, 2012a), critical commentaries on mobile ontologies and processual thinking are also numerous and widespread. One of the earliest and most frequently reiterated concerns relates to the articulation of certain mobile ‘figures’ – particularly the nomad, traveller and flâneur – as literal and/or metaphorical figures of resistance in postmodern theory, typified by Deleuze and Guattari’s ‘nomad’ (Braidotti, 1994; Deleuze and Guattari, 1988; see Cresswell, 1997; Engebriksen, 2017).⁵ Feminist thinkers, post-structuralists and mobility scholars pointed to the highly gendered, ahistorical, Eurocentric and romanticised imagination of these mobile figures by Western scholars (Cresswell, 1997, 2006; Kaplan, 1996; Sutherland, 2014; Wolff, 1993).⁶ As Tim Cresswell very succinctly argued:

The postmodern nomad is a remarkably unsocial being – unmarked by the traces of class, gender, ethnicity, sexuality and geography. They are nomads who appear as entries on a census table, or dots on a map – abstract, dehistoricized and undifferentiated – a mobile mass. (Cresswell, 1997: 377)

The nomad, thus, appeared as a singular, caricatured and stereotyped figure of the Western imagination; a somewhat exotic other for Western theorists.

A second related set of concerns have focussed on the purportedly undifferentiated movements invoked in processual accounts of flows, becoming and mobile ontologies. Cresswell, in particular, repeatedly argued that ‘differences between mobilities... need to be taken seriously’ and ‘understood as material geographical acts which are given meaning and are implicated in relations of power’ (Cresswell, 2001: 22). Mobility was, here, contrasted with ‘the abstract idea of movement’, with the former being ‘a thoroughly social facet of life imbued with meaning and power’ and ‘composed of elements of social time and social space’ (Cresswell, 2006: 4). Similar criticisms have been directed at ontologies of flow and flux by Thomas Sutherland, who draws upon the ‘object-oriented’ philosophies of Graham Harman and Levi Bryant to argue that ‘the metaphysics of flux reifies, ontologises, and normalizes the primacy of process, and thus inadvertently plays into some of the most damaging hegemonic ideals of the network society’ (Sutherland, 2013: 7).⁷ My principal task in this paper is to try and break away from the cycle of simplistically categorising binary approaches (e.g. of apolitical processual thinking versus politicised realist critiques of the movements of material entities), while acknowledging the wondrous perception of molar stasis identified by Brian Massumi above (Massumi, 2002).

A third line of critique of mobile ontologies is couched in a set of responses framed as ‘realist’. The broad argument, here, is that mobile ontologies and processual thinking defy common-sense understandings of movement, fixity, materiality, subjectivity, action and ordering, where these ‘common-sense’ experiences are inevitably grounded in foundational Western metaphysical principles, including quasi-Newtonian physical theories of movement, materiality and objectivity.⁸ Sutherland (2013: 10) labels his approach ‘ontologically realist’, drawing upon ‘object-oriented’ approaches to underpin his critique of philosophies of

becoming, flow, process and acceleration. Cresswell, on the other hand, has mobilised specific examples of controlled and stilled mobility to question the logic and political purchase of theories of process, flow and incessant mobility (see Cresswell, 2014, opening quotation above). It is molar movements – which are clearly perceptible, whether they are actual or virtual – which, for Cresswell, matter and become embroiled in real political relations. Mobilities may be social, cultural and political productions bound up with a series of social spaces and times, but the movements Cresswell envisages conform to conventional Western physical theories, forces and affects – affirming a kind of ‘physical structuralism’ or ‘realist physicalism’ in which social and political relations may be performed or produced as a by-product of physical movements, processes and forces, *or* physical displacements may result from social and political decisions and actions. As I will go on to argue in the next section, this focus on molar political actions and entities results in a normalisation of realist ontologies, reproducing a logic which underpins much thinking in the social sciences, humanities and physical sciences, including much academic scholarship on mobility.

In contrast to Cresswell and others, this paper aligns itself with a small but important strand of work on the geographies of mobility which could be labelled ‘radically processual’ (see Adey, 2006; Bissell, 2010, 2011; Merriman, 2012a, 2016). This research draws heavily upon non-representational, processual and practice-based traditions of thinking in the social sciences and humanities (Massumi, 2002; Thrift, 1996, 2008). Movements are seen to possess different qualities and affective potential. Movements may or may not register as perceptible molar movements affecting human bodies. What is clear, though, is that movements need to be imagined outside of dualistic and binary frameworks (e.g. movement/stasis, macro/micro, agency/structure) and quasi-Newtonian ‘realist’ physical ontologies (e.g. focussing only upon the movements of what are said to be discrete, perceptible, displaced objects). Motive forces and mobility potential vary and should not simply be associated with one discrete body acting upon another discrete body. As David Bissell has powerfully argued in a paper on the vibrations experienced by passengers during railway travel:

...vibration is an event that opens up a different way of conceptualising relations between bodies, technologies and mobilities that do not conform to a static or dualistic way of apprehending materiality. ...Vibration here is not an intermediary force that is exerted by or forms a presence *between* more-or-less powerful objects. Rather the event of vibration as a process generates the very effect of different materialities whilst on the move. Tracing vibrations in this way therefore opens up a way of thinking about the uncertain and provisional connections between bodies, their travelling environments and the experience of movement where movement is not opposed to stillness. (Bissell, 2010: 480)

In his more recent writings, Bissell (2014, 2016) has focussed upon the ‘micropolitical’ practices, events and movements, and the molecular understandings of difference, which cross-cut more conventional molar or macro-political constructions of difference built around preformed social groupings and categories. Movements, here, are not simply approached as physical displacements, but as translational and relational processes, becoming, affective forces, and as events which enact connections. While mobility scholars such as Tim Cresswell, Mimi Sheller and John Urry do recognise that movements may be imagined, desired and virtual, as well as associated with actual physical displacement, a focus on molecular mobilities has the potential to go much further, enabling scholars to take seriously the movements of hormones or drugs in mobile or motile bodies (McCormack, 2008), the vibratory movements that force us to rethink bounded conceptions of matter and

embodiment (Bissell, 2010), the chemical processes degrading and moving concrete buildings (Jacobs and Merriman, 2011), and the affective movements, desires and memories circulating between bodies (Stewart, 2007). Such a focus on imperceptible molecular and minor movements is vital to our understanding of the molar movements of perceptible bodies (Bissell, 2014, 2016), and this requires a radical rethinking of John Urry's schematisation of different forms of mobility, which largely focuses on the circulation of molar bodies and entities (Urry, 2007; also Sheller and Urry, 2006).

Molar and molecular geographies

The molar and molecular are not opposed binary forces or world-views, and neither are they distinguished by size or scale (Deleuze and Guattari, 1988: 215). The challenge is that Deleuze and Guattari *do* refer to 'macropolitics' and 'micropolitics', seemingly smuggling questions of size and scale back in, but in focussing on the molecular and molar I seek to avoid that here. The molar and molecular are characterised by their (im)perceptibility and affective qualities, and they presuppose one another, coexisting as different forms of segmentarity: one rigid and punctual, attuned to wholes, bodies, individuals and the realms of perception and representation; the other, supple, non-representable, imperceptible and concerned with processual masses that are perpetually becoming (Deleuze and Guattari, 1988: 213–215):

Every society, and every individual, are thus plied by both segmentarities simultaneously: one molar, the other *molecular*. If they are distinct, it is because they do not have the same terms or the same relations or the same nature or even the same type of multiplicity. If they are inseparable, it is because they coexist and cross over into each other. . . .the two segmentarities are always in presupposition. In short, everything is political, but every politics is simultaneously a *macropolitics* and a *micropolitics*. Take aggregates of the perception or feeling type: their molar organization, their rigid segmentarity, does not preclude the existence of an entire world of unconscious micropercepts, unconscious affects, fine segmentations that grasp or experience different things, are distributed and operate differently. There is a micropolitics of perception, affection, conversation, and so forth. (Deleuze and Guattari, 1988: 213, emphases in original).

A focus solely on molar entities leads us to overlook the proliferation of molecular forces, desires, movements, and affects which both underpin molar formations and act as incipient, 'cancerous' forces undermining molar organisations (Deleuze and Guattari, 1988: 215). Likewise, a focus solely on molecular desires, energies, forces and movements would fail to explain the wondrous, forceful effects of stasis, discreteness, individuality and objectivity, which are variously capitalised, commodified and endowed with faith, hope, agential power, political potential and responsibility. As Félix Guattari would argue in his conversations and writings on *Molecular Revolution in Brazil* in 1982:

There is no logic of contradiction between the molar and molecular levels. The same kinds of elements and the same kinds of individual and collective components that operate in a certain social space may function in an emancipatory way at a molar level, and coextensively may be extremely reactionary at a molecular level. (Guattari and Rolnik, 2008: 187)

With molar and molecular forces and affects operating simultaneously and transversally, the processual unfolding of events and becoming of matter, things, subjects and movements

may not be as easy to value, judge or categorise as some might suggest. As Guattari again remarks:

...a community work group may have a clearly emancipatory action at a molar level, but at a molecular level have a whole series of phallocratic, reactionary leadership mechanisms. ... Inversely, the action might reveal itself to be reactionary and conservative at the level of the visible structures of social representation, at the level of the discourse as articulated on the political or religious level or whatever, that is, at a molar level. And at the same time components of expression of desire, of expression of singularity, may appear at a molecular level, elements that do not in any way lead to a reactionary, conformist politics. (Guattari and Rolnik, 2008: 187)

Guattari's mobilisation of the concepts of 'molecular revolution' and 'molecular politics' formed an important part of his practical attempts to rethink psychoanalytic conceptions of desire, political action and power (see Guattari, 1984; Guattari and Rolnik, 2008).⁹ But Guattari was no idealist, and he did not romanticise molecular movements as inherently transgressive or liberatory actions undermining molar entities and molar movements. For example, he was quite clear that molar things 'like poverty exist' and exert a force, and that 'the affirmation of molecular movements is not enough' (Guattari and Rolnik, 2008: 200). Thus, while it is clearly not desirable to universally fluidify and de-order all material entities – or simply to dismiss molar entities and movements as Western fictions – it is also important to understand the role of molecular mobilities in affective relations, generating sensations, and in shaping events, assemblages, political decisions, and moods. Indeed, realist approaches to movement and mobility lead scholars to overlook or ignore the potential power of molecular movements and forces, assuming that only discrete, molar movements and forces 'matter' in enacting change. There are exceptions, as evidenced in particular strands of political theory (Bennett, 2010; Connolly, 2011), philosophy (Massumi, 2002) and human geography (Adey, 2014; Amin and Thrift, 2013; Anderson, 2014; Bissell, 2010, 2014, 2016; McCormack, 2008). Derek McCormack, for example, has drawn upon the long history of processual thinking – including Lucretius, Spinoza, and Deleuze and Guattari – to explore 'the possibility of cultivating a kind of molecular logic of sense' in which an attention to molecular affects forces us to rethink conceptions of materiality, 'the perceptual limits of thinking', non-representational qualities of space-times, 'empirical encounters', and the status of human subjectivity and objectivity (McCormack, 2008: 360, 369–371). While some scholars have equated an increasing attention to molecular processes and forces with a preoccupation with microscopic chemical or biological circulations cross-cutting bodies and environments, McCormack reminds us that Deleuze–Guattarian conceptions of molecular-ity are not, and should not, simply 'reduce questions of the molecular to those of the biochemical' (McCormack, 2008: 368). Why? Because biochemical knowledges approach molecules as 'additional', quantifiable, microscopic building-blocks out of which larger, molar entities emerge, rather than as transversal entities characterised by their imperceptibility.

Conceptualisations of 'molecular mobility' and 'molecular politics', then, can contribute to broader attempts to think between or across the social sciences, natural sciences, physical sciences and humanities, helping to advance post-humanist, more-than-human and more-than-material accounts of the bodies, movements and affects constituting our lively worlds. Molar movements are cross-cut or transversed by multiple molecular movements, forces and affects, and they are, in turn, molecularised, deterritorialised, and become imperceptible. Movements may be molar in some discursive, representational and ontological formations

but molecular in other ontological formations. The continual, overlapping and incipient relational processes of *becoming*-molecular and *becoming*-molar hint at the futility of simply localising the origins of mobile actions, practices, forces or decisions in discrete, molar sovereign bodies. As multiple, distributed and relational emergent processes, molecular and molar movements necessitate an attention to the diverse vibrant materialities and mobilities registered as events, actions and individualised things (Bennett, 2010). This in turn requires social theorists to question the simplistic physical assumptions that are often unthinkingly articulated in socio-spatial theories; assumptions which are frequently underpinned by ‘absolutist, Newtonian conceptualisations of movement, space, time and speed’ (Merriman, 2012a: 10). Here, social scientific thinking often remains resolutely realist, physicalist, molar and macropolitical in imagining relationships between pre-formed bodies, movements, materials, actions and effects, although advancements in social and political theory over the past century have led social scientists to see discrete actions and movements as impelled by social and political forces and decisions, wills or desires as well as by physical processes.

Molecular and molar mobilities: The Israeli separation wall

At first glance, boundary walls and fences would seem to be unlikely candidates for a discussion of molar *and* molecular mobilities, not least because they have a brute materiality, appear relatively static or still, and are clearly perceptible to the majority who encounter them. Boundary walls are resolutely molar in their physical presence, and of course they are frequently referenced as examples of political architectures and engineering features which arrest or prevent movements. The molar materialities of boundaries such as the Israeli separation wall seem to present challenges to processual approaches that trace the perpetual motion and incessant flows comprising our worlds. As Cresswell has argued, a focus on ‘molecular vibrations’ may not be ‘much comfort’ to Palestinians whose movements are impeded by infrastructures of control such as the separation barrier in the Israeli-occupied West Bank (Cresswell, 2014: 719). The movement of thinking-and-feeling Palestinians is prevented by the molar materialities of check-points and a highly concrete wall, and clearly Cresswell has a point. But if we focus our attention on the multiple ways in which diverse West Bank mobilities are enacted, slowed and dispersed by the wall, if we examine how movements involve both molecular affects and molar consistencies, then a more complex understanding of the politics and ecologies of the barrier might emerge.

As a first point, it is important to acknowledge that the so-called Israeli Separation Wall is strongly identified with molar geographies. For example, Hagar Kotef, Wendy Pullan, Eyal Weizman and others have outlined how it forms part of a complex infrastructure of discipline, separation and apartheid that includes bypass roads, tunnels, check-points, observation towers, surveillance systems, identity cards, permits, and much more (Joronen, 2017; Kotef, 2015; Pullan, 2007, 2013; Pullan et al., 2007; Selwyn, 2001; Tawil-Souri, 2011; Weizman, 2007). Using these different architectures and technologies, the Israeli government, military and border force have attempted, ‘in the name of security, to physically fragment and isolate Palestine, and to reinforce and ultimately annex Jewish settlements in the West Bank’ (Pullan, 2007: 52). The 8-metre high wall has become a molar object of hatred and oppression for many Palestinians, and is presented as a technology and guarantor of security and comfort for Israelis. For many West Bank Palestinians it has had a catastrophic impact on their and others’ lives, work and social and familial networks – severing neighbourhoods, families, farmers from their land, patients from hospitals, employees from their workplaces, children from their schools and established traffic

routes (Tawil-Souri, 2011). Wall gates and crossing ‘termini’ are positioned and controlled in such a way that many Palestinians find it difficult and demeaning to cross through these check-points – either at all, or with any speed (Bishara, 2015; Joronen, 2017; Kotef, 2015). The wall is represented and registered as a molar presence caught in a politics of division, discreteness, discipline and harassment (Kotef, 2015). In creating new spatial and temporal logics, new channels of movement and new waiting zones, the wall and crossing-points have enacted a series of other prominent, clearly perceptible mobilities – from the movements of traders and taxi drivers whose businesses centre on checkpoints (Tawil-Souri, 2011) to the movements and actions of the large number of Israeli, Palestinian and international activists who oppose the wall (see Boullata, 2005; Kotef, 2015; Parry, 2010).

I want to argue, here, that while it is important to acknowledge these molar representations, forces and bodily movements relating to the separation wall, there are also an innumerable number of molecular forces, movements, affects and desires which challenge, deterritorialise, reterritorialise and reinforce the molar force and politics of the wall and its control by the Israeli Defence Force and Israeli Border Police. These molecular affects and motions constitute a series of transversal minor political forces comprised of more-or-less imperceptible movements between bodies. In some cases, minor revolutionary acts emerge as attempts to render the molar structures of Israeli occupation molecular (see Parry, 2010), while in other cases these molecular affects and movements appear central to Israeli disciplinary and security regimes, which start to gain a perceptible consistency, *becoming*-molar with and through bodies of different kinds (see Weizman, 2007).

These molecular affects and mobilities are particularly evident in the embodied encounters and affective geographies of Israeli check-points/wall crossing-points, where Palestinians experience frequent harassment, bureaucracy, delays, discomfort, pain, intense heat and cold, and an inconsistent enforcement of regulations (Tawil-Souri, 2011). In an attempt to deter mistreatment by soldiers and smooth the passage of citizens, a group of several hundred middle-class Israeli women known as the Machsom Watch (Checkpoint Watch) have, since 2001, exerted a physical presence at check-points, kept and filed daily reports, and attempted to intervene in situations where Palestinians are maltreated – talking to officials at the check-points and phoning contacts elsewhere (Boullata, 2005; Kotef, 2015; Kotef and Amir, 2007). Over 24,700 written reports have been logged online by these women since 2002, and what is striking when reading them is that while accounts of extreme harassment, violence and acts of terrorism at check-points do occur, many reports reveal traces of a kind of banal and incipient molecular affective engineering which underpins the molar geographies of these spaces and bordering practices. Thus, while the increasing use of security and disciplinary technologies such as gates, cages and turnstiles has accompanied the increasingly permanent, engineered and molar presence of these military–governmental infrastructures, there is no doubt that Palestinian civilian bodies, Israeli military bodies, Israeli activist bodies and the molar geographies of these termini are caught in tense relations cross-cut by molecular movements and affects.

Everyone is aware of these tense relations, and the Machsom Watch’s partial success is probably due to their status as ‘fully included subject[s]’ (Kotef, 2015: 38) whose molar presence and authority as older women¹⁰ of a particular ethnicity, religious alignment, class, nationality and citizenship allows them to directly observe, document and challenge the conduct of soldiers towards Palestinians (Kotef and Amir, 2007). However, the molar force and identities of these activists is inseparable from a series of molecular desires, affective relations and movements holding them in tension with the military personnel and Palestinian civilians in these regulatory and disciplinary environments, as molecular movements gain consistency and are territorialised, and molar movements and materialities are

continually deterritorialised. Molecular movements and affective political ties hold differentially ‘molarised’ bodies – i.e. differentially raced, gendered, aged, sexualised, nationalised, documented and undocumented bodies – in tension and produce distinctive subject positions, and the molar geographies of bodies and subjects are always cross-cut by such molecular movements and affects.

Daily reports by the Machsom Watch’s observers at the major crossing point at Qalandia – between Ramallah and the northern suburbs of East Jerusalem – reveal something of the incessant drudgery, banal rhythms, slow movements and molecular affects circulating in these spaces:

9 July 2017, Morning:

We arrived at Qalandia at 5.30. We parked and went on foot to the Palestinian side. . . Women joined the ordinary line from the side at the entrance to the turnstiles. A little after 6 the soldiers in the aquarium were changed. The new soldier paid his attention wholly to his cellphone and very little to opening the turnstiles. Only when there were hardly any people left near the windows and the people crowded together in the turnstiles began to shout did he open them. (Dahan-Ramati and Ginsburg, 2017)

24 October 2017, Morning:

Only four checking stations were open when we arrived at 5:30 a.m. (the fifth opened at 6:20) and the lines into the checkpoint reached to the end of the parking lot. The soldier in charge of opening the turnstiles, so that people could approach the checking stations, was very stingy in allowing people through. Thus a steady build-up of tension was palpable. It peaked at 6:00, when an altercation broke out at the entrance to the left cage – which is always a magnet for violence because of queue-jumpers—and the line discipline collapsed altogether. For the next hour, men fought each other at the entrances to the three cages, while most people simply milled around the shed. Lines began to form again only at about 7:00. (Syvan and Friedman, 2017)

A deliberate channelling, slowing-down and stopping of movements (Joronen, 2017), and an intransigence, derision and uncompassionate response by many guards, acts upon Palestinians as categorisable yet ‘massed’ molar entities who either do or don’t have the correct nationality, ID cards, permits, land papers, gender, age profile, etc. Minor ruses, political acts and molecular affects work to both territorialise and deterritorialise these molar geographies, being sensed, apprehended and documented by Machsom Watch volunteers as palpable tensions, atmospheres, moods, and in eruptive events of frustration, anger, pain, suffering, relief, joy and grief.

Israeli film-maker and Machsom Watch volunteer Neta Efrony also captured the minor geographies of the Qalandia checkpoint in her 2009 film *Kalandia: a Checkpoint Story* – charting its rapid evolution from a temporary security check-point in 2001 to a more permanent crossing with ‘terminal’ buildings, lanes, signs, and multiple turnstiles by 2008. Efrony filmed both ordinary and extraordinary scenes and events at the checkpoint, capturing the emotions of Palestinians on film, and narrating the abuses and dehumanising conditions they experience while struggling to go about their lives in the West Bank. A notable feature of the check-points (captured in Efrony’s film) are frequent and unannounced changes in regulations governing who can cross, when and in what line, as well as the disjuncture between signed instructions, announcements, and enforced regulations. The Israeli authorities seem intent on molecularising their own molar logics, whether to slow

down, stop or deter the movements of Palestinians, confuse, frustrate and harass Palestinians, or to maintain irregular disciplinary regimes which are unpredictable and less susceptible to terrorist threat (cf. Weizman, 2007). Many sections of Efrony's film reveal traces of the molecularisation of the molar geographies of the Qalandia checkpoint, and of molecular affects and forces gaining consistency, erupting into chaotic scenes and being apprehended and expressed by Palestinians as various emotions, including frustration, weariness, and anger:

7 September 2006. Announcement over loud-speaker: "Line 3, blue I.D. cards". Palestinian man: "We went to line 3. He's playing with his computer and he doesn't want to let us pass, he told me to go back to line 4". Announcement: "Line 3, blue I.D. cards". Palestinian woman: "Again? Don't they take their job seriously? They keep sending them from place to place".

The molar checkpoint infrastructure – with caged lanes and signs displaying rules – is repeatedly molecularised, as border officers slow or prevent passage, transferring Palestinians to different lines, closing lines, condescending and belittling individuals, and at times harassing and detaining Palestinians on the basis of minor suspicions or anomalies with their permits.

Minor and minoritarian movements, desires, actions and affects may be imperceptible and perhaps even unremarkable, but these incessant molecular affects take hold of bodies in tension, and in another study by Amahl Bishara – an in-depth ethnographic study of Palestinian driving – we are provided with further insight into the highly complex, variegated and multiple molecular forces and affective tensions which emerge in relation to Palestinian movements through and around the wall. Bishara's reflexive ethnography traces the multiple affects, sensations and emotions generated through journeys with Palestinians in the West Bank and Israel, and her accounts hint at the molecular affective forces and nascent molecular politics which can emerge through such ordinary and eventful spaces and practices:

Palestinian knowledge gained on the road is imbued with emotions. Travelling can be pleasurable for these Palestinians because it can give them the sense of being out on the land. They take joy in mobility against the backdrop of Israeli policies that attempt to confine and fragment them. These positive feelings are deeply embodied, as drivers and riders revel in speed, in the curves and hills of their country. Yet not all of these feelings are positive. Palestinians often have the sense of being trapped and immobile. The stink of neglect settles heavily where sewage intersects with roads at Wadi Al-Nar and in the Negev. Most obviously, the West Bank Palestinians travelling illegally into Israel are afraid. They also frequently feel guilt at leaving people behind. (Bishara, 2015: 48)

Molecular affects hold different bodies in tension, circulating through and between these spaces, bodies and environments. As Bishara remarks, these affects are apprehended and expressed by Palestinians as embodied emotions and sensations of different kinds, whether joy, guilt or fear, or sensations of speed and freedom. Perceptible molar bodies in movement are caught in affective tension with other molar bodies, and they are cross-cut by transversal molecular movements and circulations which hint at the incipient, often imperceptible processes through which such molar entities are becoming-molecular.

Molecular movements and molecular vibrations may also be seen to underpin the molar geographies of the wall itself, echoing or repeating JD Dewsbury's (2000: 487) assertion that while buildings may seem 'permanent, less ephemeral than you' they are always in

the process of ‘falling down. . . very slowly (hopefully)’. This approach to molecular movements is grounded in both processual thinking and understandings of chemical molecular affects; highlighting the temporality of the separation wall in terms of its slowly shifting materialities and geo-chemical structures as well as its potential to become redundant. Such statements about the temporary or temporal nature of the wall can help us to rethink the materiality of the wall and alert us to pre-wall pasts and hopeful post-wall futures, but we need to be mindful of political dangers in labelling the wall as a temporary barrier, not least because Israeli politicians such as Benjamin Netanyahu (2004) have referred to the fence and wall as ‘not a permanent political border but a temporary security barrier’ in order to justify its positioning for purely security reasons *in* the West Bank, east of the ‘political’ Green Line set out after the 1948 Arab–Israeli War. Of course, the upgrading of the fence to a modular concrete wall and the gradual introduction of more permanent structures at check-points suggests that a more permanent presence is now envisaged by Israeli authorities.

Conclusions

“Objects” appear as such because their becoming proceeds at a speed or a level below the threshold of human discernment. It is hard to keep one’s mind wrapped around a materiality that is not reducible to extension in space, difficult to dwell with the notion of an incorporeality or a differential of intensities. This is because to live, humans need to interpret the world reductively as a series of fixed objects. . . (Bennett, 2010: 58)

Perceptible, molar entities and movements appear so real and tangible that we take them for granted, and it is perhaps no surprise that scholars can react so badly to the suggestion that things might be otherwise, and movements may be molecular and imperceptible. The problem, captured in the opening quotations by, on the one hand, Deleuze and Guattari, and on the other, Tim Cresswell, is that mobility and fixity are frequently associated with incompatible world-views framed around a series of binaries. In contrast, this paper has argued that mobility scholars need to move beyond such simplistic binaries as movement/stasis and action/inaction in order to refocus attention on the minor or molecular movements, affects and political events which are just as important to the geographies of mobility as molar displacements, materials and identities. My argument is that movements must be apprehended through a series of lines of flight, tendencies or tensions between the molar↔molecular and perceptible↔imperceptible. Bodies are neither one nor the other, but are continually becoming both. Thus, when things speed up or slow down too much, movement is rendered imperceptible, making things either appear to be still or not present, and any politics of mobility must incorporate these different senses of movement, translation, displacement and mobile relations. One key conclusion is that there are clear challenges and limitations with relying solely upon representations and perceptions to categorise situations, matter and events as either moving or still. These kinds of distinctions and judgements – grounded as they are in Western visual cultures and Western economic, political and scientific understandings of the value, use and ‘objectness’ of things – brings to mind Bruno Latour’s (1993) observations about Western theories of modernity, and the somewhat arbitrary distinction between nature and culture. If the problem with theories of mobility and fixity is precisely their division or binary positioning, then scholars must focus their efforts on tracing how affects gather, circulate, gain consistency through and traverse bodies in different ways, as molar and molecular forces cross-cut one another, producing multiple,

intersecting, transversal geographies comprised of a plethora of perceptible and imperceptible things and movements. Highly organised, punctual molar masses and bodies may distract our attention, occupying our perceptual field for more-or-less extended periods, but vital and incessant molecular forces, affects, desires and political relations simultaneously underpin and undermine these molar perceptions. Stating that these forces, affects and movements are ‘below and above the threshold of perception’ (Deleuze and Guattari, 1988: 281) is not to state that such movements are ‘invisible’, if by that we mean that they *cannot* be registered as traces by the eye and brain. While this might be the case in certain situations for physiological reasons – e.g. with microscopic, molecular vibratory movements – other motions are not registered because of our inability to perceive the bodies associated with such movements and affects *as* discrete, punctual bodies or assemblages. What this underlines is that while molecular affects and movements may be imperceptible, they need not be small or microscopic, just as molar entities need not be large or macroscopic to be perceptible. Indeed, knowing, understanding and representing molecular forces, affects and movements has always been a key aim of a broad array of individuals and collective groups, from mathematicians and scientists, to politicians and philosophers, whether in attempting to provide mathematical proofs of imperceptible phenomena, model or visualise molecular processes, engineer molecular affects, or understand the processual nature of events – and, by doing this, such molecular forces are frequently ‘molarised’, tamed and represented.

With the move away from a focus solely on molar actions and movements – with the disavowal of certain realist approaches, and the dissolution of the certainties surrounding molar movements, forces, entities and actions – a commonly posed question arises; one that has been well-aired in debates surrounding non-representational theories and the politics of affect (see, for example, Amin and Thrift, 2013; Anderson, 2014; Barnett, 2008; Bennett, 2010; Joronen and Häkli, 2017; Thrift, 2008). Where does the energy or force of action emerge from, and what are the implications of moving away from such clear attributions of political will, intention, and action for theories of power, blame and responsibility? In focussing on the affective relations which hold bodies in tension, a focus on molecular movements and affects necessitates that we shift our attention away from a single sovereign (human) body from which power, agency or action might be seen to emanate or originate (Allen, 2001). Molecular movements and affects hint at the betweenness and relational nature of force and action. Action and movement do not simply well up at single points conjured by some vital force or individualised energy. Molecular movements generate tension and emerge where two or more bodies are attuned and possess the capacity to affect or be affected (Deleuze, 1988; Deleuze and Guattari, 1988). Molecular affects and movements hint at the processual and relational nature of political actions, movements and events; the vibrant movements of social and political life (Bennett, 2010). Molecular affects, desires and movements hold material bodies or things such as the Israeli separation wall in tension with Israeli military personnel, Israeli peace activists, Palestinian residents, international campaigners, check-point cages, ID cards and a plethora of other material bodies and environments. On the one hand, molecular affects and becomings may give rise to revolutionary thoughts, feelings, desires and movements which transverse the molar materialities of this contentious wall. On the other hand, molecular movements and affects are frequently mundane and banal, taking hold of individual bodies and being apprehended and expressed as feelings, moods, atmospheres and emotions; just as certain molar entities are deterritorialised and are on the verge of *becoming*-molecular.

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Notes

1. Processual thinking shows up in many traditions of philosophy, ranging from Greek thinkers such as Heraclitus, Epicurus and Lucretius, to 19th, 20th and 21st century philosophers such as Henri Bergson, CS Peirce, John Dewey, Alfred North Whitehead, Gilbert Simondon, Michel Serres, Ilya Prigogine, Isabelle Stengers, Deleuze and Guattari, Jane Bennett, Brian Massumi and Erin Manning. In this paper, I focus upon the lineage of processual and non-representational thinking which is traceable through Lucretius, Bergson, Serres, Deleuze and Guattari, Massumi, Manning, Thrift and others, focussing in particular on the writings of Deleuze and Guattari. On the use of processual approaches in mobility writings, see: Thrift (1996, 2008), Adey (2006, 2010), Bissell (2010, 2011, 2014, 2016), Bissell and Fuller (2011), Merriman (2012a, 2012b, 2016).
2. Nomadic thinking has been discussed by a range of feminist thinkers, including Braidotti (1994), Wolff (1993), Grosz (1994) and Kaplan (1996). See also discussions by Cresswell (1997, 2001, 2006, 2010) and Sutherland (2013, 2014).
3. The concepts of the molar and molecular reoccur throughout much of Félix Guattari's solo writings of the 1970s and 1980s (Guattari, 1984, 2009, 2011, 2013; Guattari and Rolnik, 2008), as well as appearing in his most prominent collaborations with Deleuze, notably *Anti-Oedipus* and *A Thousand Plateaus* (Deleuze and Guattari, 1984, 1988).
4. Writing in *A Thousand Plateaus*, Deleuze and Guattari explain how 'the human being is a segmentary animal' and 'we are segmented from all around and in every direction': 'Dwelling, getting around, working, playing: life is spatially and socially segmented' (Deleuze and Guattari, 1988: 208). Segmentations may be 'binary', 'circular' or 'linear'. They may be 'supple' as in many 'primitive' societies, or 'rigid' as in most 'modern' societies (Deleuze and Guattari, 1988: 208–210).
5. Cresswell (1997, 2006, 2011) has provided a critical discussion of the nomad and other mobile figures such as the vagabond, vagrant, traveller, tourist and migrant.
6. Deleuze and Guattari's writings on movement, flow, rhizomes, nomadism and becoming have been widely discussed in different strands of feminist philosophy, from Rosi Braidotti's (1994) affirmation of nomadism in *Nomadic Subjects* to Kaplan's (1996) critical commentary on theories of nomadism and becoming in *Questions of Travel*. A good critical overview of feminist approaches to Deleuzo-Guattarian theories of movement, flow and becoming is provided in Elizabeth Grosz's (1994) *Volatile Bodies*, where she discusses writings by Alice Jardine, Luce Irigaray and Rosi Braidotti before tracing out what a Deleuzian feminism might look like (Grosz, 1994; see also Katz, 1996; Buchanan and Colebrook, 2010; Patton, 2006; Engebriksen, 2017).
7. Object-oriented philosophies and object-oriented ontologies are generally associated with the broader field of speculative realism, and central to this diverse body of work are a series of speculative attempts to examine the existence of objects and 'reality independently of thought and of humanity' (Bryant et al., 2011: 3). Much of this work is critical of processual and relational approaches advanced within continental philosophy (see Bryant et al., 2011; Harman, 2010).
8. These 'common-sense' ontologies tend to be rooted in prevailing physical theories and political ideologies, and they have a long history. For example, Hagar Kotef has shown how the physical theories of motion advanced by 17th century natural philosophers/scientists such as Newton were

closely aligned with the early political philosophy of Thomas Hobbes, who produced a natural philosophy in which ‘bodies... collide violently’ and ‘their motion is not a function of agency but the result of the physical force of one body against another’ (Kotef, 2015: 66).

9. On the geographies of Guattari’s philosophies, see Gerlach and Jellis (2015), Saldanha (2007, 2015), Woodward (2015).
10. The age of the women involved in the Machsom Watch appears in many commentaries, and on their website they state that ‘most’ of their members ‘are not young’ (Machsom Watch, 2018). The core of their active membership are said to be aged 50–80.

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